AIR POLLUTION CONTROL CONSTRUCTION PERMIT

EI FACILITY NO: 471006470 CONSTRUCTION PERMIT NO.: 16-JJW-075

TYPE: Construction Permit for Process(es): F10, P35A, P36A, P60, P62, P63, P64, P65

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Fox River Valley Ethanol LLC

Street Address: 4995 State Road 91
Oshkosh, Winnebago County, Wisconsin

Responsible Official, & Title: Mr. Neal Kemmet, President & General Manager

is authorized to construct a new grain dryer and associated grain receiving and storage operations, installation of a 45,000 gallon liquefaction tank, and replacement of an existing cooling tower described in the plans and specifications dated April 29, 2016, in conformity with the conditions herein. The authority to construct, modify, replace and/or reconstruct any process covered in this Construction Permit expires **eighteen (18) months** from the date of issuance. This approved period to construct, modify, replace and/or reconstruct may be extended for up to 18 months upon request for cause, prior to expiration, unless otherwise specified by this construction permit. [s. 285.60(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code]

The conditions in this permit that originated in a construction permit are permanent and may only be revised through a revision of the construction permit condition, revision of a construction permit, or through the issuance of a new construction permit. [s. 285.66(1), Wis. Stats.]

Conditions of the permit marked with an asterisk (*) have been created outside of the Wisconsin's federally approved State Implementation Plan (SIP) and are not federally enforceable.

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in all Parts hereof.

Dated at Oshkosh, Wisconsin July 20, 2016

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By /s/ Imelda Hofmeister
Imelda Hofmeister, Environmental Engineer Supervisor

Part I

A. Process P60, Stack S60, Control C60 – Column Dryer		
1. Pollutant: Particulate Matter Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed the more restrictive of: (a) 0.20 pounds of particulate matter per 1,000 pounds of gas; (b) the value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(m) and (2), Wis. Adm. Code; 16-JJW-075] (2) PM_{10} emissions from Stack S60 may not exceed 1.60 pounds per hour. [s. 285.65(3), Wis. Adm. Code, and s. NR 404.04(8), Wis. Adm. Code; 16-JJW-075] (3) The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]	(1) The permittee may only use natural gas, or another fuel approved by the Department in advance, in this dryer. [s. 285.65(3), Wis. Stats.; 16-JJW-075] (2) The permittee shall maintain the records in I.A.1.c.(3) - (6) to demonstrate compliance with the limits in I.A.1.a. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Particulate Matter Emissions: Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075] (2) Reference Test Method for PM_{10} Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075] (3) The permittee shall maintain records that show the fuels that the dryer is capable of combusting. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (4) The permittee shall maintain records of the calculation of the particulate matter and PM_{10} potential to emit, in pounds per hour, for this process. These records shall include the maximum hourly throughput, emission factors, source of the emission factors and any other information used in the calculation. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (5) The permittee shall keep and maintain documentation that the size of the column dryer plate perforations do not exceed 2.4 mm diameter (ca. 0.094 inch). [ss. NR 439.04(1)(d) and NR 440.47(3)(a)1., Wis. Adm. Code, 40 CFR 60.302(a)(1); 16-JJW-075] (6) The permittee shall maintain records of all activities taken to prevent or reduce fugitive dust. These records shall include, at a minimum, a description of the activity and the date and time that each activity was taken. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]

A. Process P60, Stack S60, Control C60 – Column Dryer		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. The exceptions under s. NR 431.05, Wis. Adm. Code, do apply. [s. NR 431.05, Wis. Adm. Code; 16-JJW-075]	(1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075] (2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]

B. Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)
Process P63, Stack S63, Control C63 – Dryer Silo #2 (South)

1. Pollutant: Particulate Matter Emissions

a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed the more restrictive of: (a) 0.40 pounds of particulate matter per 1,000 pounds of gas; (b) the value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2), Wis. Adm. Code; 16-JJW-075] (2) PM_{10} emissions may not exceed 0.005 pounds per hour from each Stack S62 and S63. [s. 285.65(3), Wis. Stats. and ss. NR 404.04(8)(2) and NR 404.05(3), Wis. Adm. Code; 16-JJW-075]	(1) These storage silos shall be equipped with bin vent filter(s) to control particulate matter emissions at all times the silo is loading or unloading materials. [s. 285.65(3), Wis. Stats.; 16-JJW-075] (2) The permittee shall perform periodic inspections of the bin vent filter(s) to ensure that the control equipment is operating properly. These inspections shall be performed at least once every six (6) months or other frequency as specified by the Department. [s. NR 406.10, Wis. Adm. Code; 16-JJW-075] (3) Stack Parameters:[1] The following stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases; and the stack shall have the following minimum stack height above ground level: Stack Height (ft) S62 90.5 S63 90.5 [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Particulate Matter Emissions: Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075] (2) Reference Test Method for PM_{10} Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075] (3) Records shall be kept of all inspections and maintenance or repairs performed on the bin vent filter(s), and shall include the date of the action, a description of the action and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (4) The permittee shall keep and maintain on-site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]

B. Process P62, Stack S62, Control C62 – Dryer Silo #1 (North)
Process P63, Stack S63, Control C63 – Dryer Silo #2 (South)

2. Pollutant: Visible Emissions

a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075]	(1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075] (2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]

[1] These requirements are included because the source was reviewed with these stack parameters and it was determined that no NAAQS will be violated with these parameters.

C. Process P64, Stack S64, Control C64 – Wet Grain Receiving Pit & Auger #3		
1. Pollutant: Particulate Matter Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed the more restrictive of: (a) 0.40 pounds of particulate matter per 1,000 pounds of gas; (b) The value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(n) and (2), Wis. Adm. Code; 16-JJW-075] (2) PM_{10} emissions may not exceed 0.02 pounds per hour from Stack S64. [s. 285.65(3), Wis. Stats. and ss. NR 404.04(8)(2) and NR 404.05(3), Wis. Adm. Code; 16-JJW-075] (3) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any process emission which contain particulate matter in excess of 0.023 g/dscm (ca. 0.01 gr/dscf). [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(b)(1), s. NR 440.47(3)(b)1., Wis. Adm. Code; 16-JJW-075]	(1) The permittee shall use a baghouse to control particulate matter emissions from this process whenever it is operating. [s. 285.65(3), Wis. Stats.; 16-JJW-075] (2) The permittee shall install, calibrate, maintain and operate devices for measuring the pressure drop across the baghouse used to control emissions from this process. [s. NR 439.055(1)(a), Wis. Adm. Code; 16-JJW-075] (3) The permittee shall maintain the pressure drop across the baghouse within 1 to 8 inches of water column. An alternate range may be approved by the Department using the procedures under ch. NR 407, Wis. Adm. Code. [s. 285.65(3), Wis. Stats. and s. NR 439.055(1)(b), Wis. Adm. Code; 16-JJW-075] (4) The permittee shall perform a periodic inspections of the baghouse to ensure that the control equipment is operating properly. This inspection shall be performed at least once every six (6) months or other frequency as specified by the Department. [s. NR 406.10, Wis. Adm. Code; 16-JJW-075] (5) Stack Parameters:[2] The following stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases; and the stack shall have the following minimum stack height above ground level: Stack Height (ft) S64 10 [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Particulate Matter Emissions: Whenever emission testing is required, the permittee shall use US EPA Method 5 for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075] (2) Reference Test Method for PM_{10} Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Test Method 201A for filterable and US EPA Method 202 for condensable backhalf, or another method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075] (3) To demonstrate compliance with the emission limitation under I.C.1.a.(3), Method 5 shall be used to determine the particulate matter concentration and the volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 1.70 dscm (60 dscf). The probe and filter holder shall be operated without heaters. Method 2 shall be used to determine the ventilation volumetric flow rate. [s. 285.65(13), Wis. Stats. and 40 CFR 60.303(b)(1)(&(2), s. NR 440.47(4)(b)1.&2., Wis. Adm. Code; 16-JJW-075] (4) The permittee shall measure and record the pressure drop across each baghouse once for every 8 hours of source operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 16-JJW-075] (5) Records shall be kept of all inspections and maintenance or repairs performed on the control devices, and shall include the date of the action, a description of the action and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (6) The permittee shall keep and maintain on-site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]

[2] These requirements are included because the source was reviewed with these stack parameters and it was determined that no NAAQS will be violated with these parameters.

C. Process P64, Stack S64, Control C64 – Wet Grain Receiving Pit & Auger #3		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075] (2) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any process emission which exhibits greater than 0 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(b)(2), s. NR 440.47(3)(b)2., Wis. Adm. Code; 16-JJW-075]	(1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, the permittee shall use US EPA Method 9, or another method approved by the Department. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075] (2) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]

B. Fugitive F10 – Wet Grain Receiving Pit & Auger #3
Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures)

1. Pollutant: Particulate Matter Emissions

a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Minimization of fugitive dust emissions: No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]	(1) The grain receiving area(s) shall be enclosed. [s. 285.65(7), Wis. Stats.; s. NR 406.10, Wis. Adm. Code; 16-JJW-075] (2) The permittee shall clean and sweep the corn / grain receiving areas daily to prevent fugitive dust emissions. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] (3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] (4) The facility shall prepare, maintain and follow a fugitive dust plan for control of fugitive dust emissions from the haul roads, grain handling and other areas. The Department may request amendments to the plan. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] (5) The permittee shall take precautions to prevent particulate matter from becoming airborne. (a) Such precautions shall include, but not be limited to: (i) Use, where possible, of water or chemicals for control of dust in construction operations. (ii) Application of asphalt, water, suitable chemicals or plastic covering on dirt roads, material stockpiles and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor or water pollution problem. (iii) Installation and use of hoods, fans and air cleaning devices to enclose and vent the areas where dusty materials are handled.	(1) <u>Reference Test Method for Visible (Fugitive Dust) emissions:</u> Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 16-JJW-075] (2) The grain receiving areas shall be enclosed. This shall be documented by the actual physical structures and by prints and other documentation. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (3) Fabric spout extensions, covered conveyors and/or other controls shall be used where practical to minimize fugitive dust from grain loading and unloading. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075] (4) The facility shall maintain daily records of cleaning / sweeping activities. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]

B. Fugitive F10 – Wet Grain Receiving Pit & Auger #3 Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures)		
1. Pollutant: Particulate Matter Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
	(iv) Covering or securing of materials likely to become airborne while being moved on public roads or railroads. (v) The paving or maintenance of roadway areas so as not to create air pollution. [s. NR 415.04, Wis. Adm. Code; 16-JJW-075]	

B. Fugitive F10 – Wet Grain Receiving Pit & Auger #3 Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures)		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075] (2) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any grain handling operation which exhibits greater than 0 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(c)(2), s. NR 440.47(3)(c)2., Wis. Adm. Code; 16-JJW-075] (3) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any individual truck unloading station which exhibits greater than 5 percent opacity. [s. 285.65(13), Wis. Stats. and 40 CFR 60.302(c)(1), s. NR 440.47(3)(c)1., Wis. Adm. Code; 16-JJW-075] (4) No owner or operator shall cause to be discharged into the atmosphere any fugitive emission from any fugitive emission from any truck loading station which exhibits greater than 10 percent opacity. [s. 285.65(13), Wis. Stats. and 40	(1) The compliance demonstrations for particulate matter shall also serve as the compliance demonstration for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; s. 285.65(13), Wis. Stats and 40 CFR 60.303(b)(3), s. NR 440.47(4)(b)3., Wis. Adm. Code; 16-JJW-075] (2) Reference Test Method for Visible (Fugitive Dust) emissions: Whenever compliance emission testing is required, US EPA Method 22 shall be used to demonstrate compliance. [s. NR 439.06(9)(b), Wis. Adm. Code; 16-JJW-075] (3) The monitoring and recordkeeping requirements for particulate matter shall also serve as the monitoring and recordkeeping requirements for visible emissions. [s. 285.65(3), Wis. Stats.; 16-JJW-075]

B. Fugitive F10 – Wet Grain Receiving Pit & Auger #3 Fugitive F10 – Grain Handling Operations (including bucket elevators or legs, scale hoppers and surge bins, turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures)		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
CFR 60.302(c)(3), s. NR 440.47(3)(c)3., Wis. Adm. Code; 16-JJW-075]		

B. Process P35A, Stack S35A – Cooling Tower
Process P36A, Stack S36A – Cooling Tower

1. Pollutant: Particulate Matter Emissions

a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed the more restrictive of: (a) 0.40 pounds of particulate matter per 1,000 pounds of gas; (b) The value of E in the equation $E = 17.31 \times P^{0.16}$; where E = Allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.05(2), Wis. Adm. Code. [ss. NR 415.05(1)(o) and (2)] (2) 0.197 pounds per hour of PM_{10} from each Stack S35A and Stack S36A. [ss. NR 404.04(8), NR 404.05(3), and NR 404.08(2), Wis. Adm. Code; 16-JJW-075] (3) Chromium compounds may not be added to the cooling water. [s. 285.65(3)&(7), Wis. Stats.; 16-JJW-075]	(1) The Total Dissolved Solids (TDS) or Total Solids (TS) concentration in the cooling water may not exceed 3,500 parts per million (ppmw), or 3,500 mg/l. The following information is the basis of the calculated potential to emit:[3] (a) Stack S35A - 10,000 gallon per minute design capacity and the design 0.001% max. circulation drift rate. (b) Stack S36A - 10,000 gallon per minute design capacity and the design 0.001% max. circulation drift rate. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (2) Stack Parameters:[4] The following stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases; and the stack shall have the following minimum stack height above ground level: <u>Stack Height (ft)</u> S35A 26.5 S36A 26.5 [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5 (including condensable particulate by US EPA Method 202). [s. NR 439.06(1), Wis. Adm. Code; 16-JJW-075] (2) The permittee shall determine and record the concentration of Total Dissolved Solids (TDS) or Total Solids (TS) in the cooling water on a monthly basis or at the frequency required under any WPDES permit if either of these values are required to be measured and recorded under the WPDES permit (but not less than monthly). [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (3) The facility shall keep and maintain documentation of the manufacture's design circulation flow rate and circulation drift rate specification for the cooling towers installed at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (4) The permittee shall maintain a description of the type of water treatment program used in the industrial process cooling tower(s), including the chemical name of each corrosion inhibitor / biocide ingredient used; the average concentration of those corrosion inhibitor / biocide ingredients maintained in the cooling water; and a copy of the material safety data sheet for each water treatment chemical or chemical compound used in the industrial process cooling tower. [ss. NR 439.04(1)(d), NR 468.30(4)(a), Wis. Adm. Code; s. 285.65(13), Wis. Stats. and 40 CFR 63.405(a); 16-JJW-075] (5) The permittee shall keep and maintain on-site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]

3 This requirement implies that compliance is demonstrated if either the TDS <u>or</u> TS values are not in excess of 3,500 ppmw or mg/l. The facility may elect to measure and record the values of either TDS or TS.
[4] These requirements are included because the source was reviewed with these stack parameters and it was determined that no NAAQS will be violated with these parameters.

B. Process P35A, Stack S35A – Cooling Tower Process P36A, Stack S36A – Cooling Tower		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Visible emissions may not exceed number 1 of the Ringlemann chart or 20% opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075]	(1) The requirements in I.D.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075] (2) The recordkeeping requirements in I.D.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 16-JJW-075]

B. Process P65, Stack S50, Control C50 – 45,000 Gallon Liquefaction Tank		
1. Pollutant: Volatile Organic Compound (VOC) Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Latest Available Control Techniques and operating practices (LACT). LACT is operation of a scrubber as a part of the process. [s. NR 424.03(2)(c), Wis. Adm. Code; 16-JJW-075] (2) 1.30 pounds per hour. [s.285.65(7), Wis. Stats.; ss. NR 406.10, NR 424.03(2)(c), Wis. Adm. Code; 16-JJW-075]	(1) Whenever the ethanol is produced at the facility, the permittee shall vent the distillation process exhaust to an operating water scrubber. [s. 285.65(7), Wis. Stats.; 16-JJW-075] (2) The wet scrubber shall have a water flow / fresh water addition rate of at least 4.0 gpm or the level/range determined to assure compliance with all limitations (but not less than 4.0 gpm). If a different level or range is needed for compliance, this shall be documented in facility records and in the material submitted to complete the operation permit application. [s. NR 445.04, Wis. Adm. Code; 16-JJW-075]	(1) Reference Test Method for Volatile Organic Compound (VOC) Emissions: Whenever VOC compliance testing is required, USEPA Method 18 or 25A shall be used. When approved in writing an equivalent test method may be substituted for the required test method. [s. NR 439.06(8), Wis. Adm. Code; 16-JJW-075] (2) The permittee shall keep and maintain onsite technical drawings, blueprints or equivalent records of the scrubber. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (3) The facility shall monitor and record the flow rate of water to the scrubber at least once every 8 hours or once per day, whichever yields the greatest number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 16-JJW-075] (4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the scrubber, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075] (5) Instrumentation to monitor the flow rates in the scrubber shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code; 16-JJW-075]

B. Process P65, Stack S50, Control C50 – 45,000 Gallon Liquefaction Tank		
2. Pollutant: Visible Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) Emissions may not exceed 20% Opacity. [s. NR 431.05(1), Wis. Adm. Code; 16-JJW-075]	(1) The requirements in 1.E.1.b. shall be used to show compliance with the visible emissions limitation. [s. 285.65(3), Wis. Stats.; 16-JJW-075]	(1) Reference Test Method for Visible Emissions: Whenever visible emissions compliance testing is required, USEPA Method 9 in 40 CFR Part 60, Appendix A, incorporated by reference in s. NR 484.04, Wis. Adm. Code shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 16-JJW-075] (2) The recordkeeping requirements in I.E.1.c shall be used for monitoring the compliance demonstration. [s. NR 439.04, Wis. Adm. Code; 16-JJW-075]

B. Process P65, Stack S50, Control C50 – 45,000 Gallon Liquefaction Tank		
3. Pollutant: Malodorous Emissions		
a. Limitations	**b.** Compliance Demonstration	**c.** Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) General Limitations. No person may allow or permit emissions into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventative measures satisfactory to the Department are taken to abate or control such emission. [s. NR 429.03(1), Wis. Adm. Code; 16-JJW-075]*	(1) The permittee shall implement an odor prevention and abatement plan. [s. NR 429.03, Wis. Adm. Code; 16-JJW-075]* (2) The plan shall be revised and updated as needed to correct any deficiencies that may develop. The Department may amend the plan. [s. NR 429.03, Wis. Adm. Code; 16-JJW-075]* (3) If objectionable odors are determined to exist/persist as a result of process operations, the facility shall propose additional means of odor control by amending the odor prevention and abatement plan and proposing the actions/controls needed to minimize the odors. [s. NR 429.03, Wis. Adm. Code; 16-JJW-075]*	(1) OBJECTIONABLE ODOR TESTS. An odor shall be deemed objectionable (malodorous) when either or both of the following tests are met: (a) Upon decision resulting from investigation by the Department, based upon the nature, intensity, frequency, and duration of the odor as well as the type of area involved and other pertinent factors. (b) Or when 60% of a random sample of persons exposed to the odor in their place of residence or employment, other than employment at the odor source, claims it to be objectionable and the nature, intensity, frequency, and duration of the odor are considered. [s. NR 429.03(2), Wis. Adm. Code; 16-JJW-075]* (2) Facility shall maintain records of the duration and intensity of any malodorous emissions that require implementation of the plan. [s. NR 439.04, Wis. Adm. Code; 16-JJW-075]* (3) The permittee shall keep and maintain onsite technical drawings, blueprints or equivalent records of the facility. [s. NR 439.04(1)(d), Wis. Adm. Code; 16-JJW-075]*

Z. General Conditions Applicable to the Construction Permit.	
1. Construction Permit Transitional Language	
a. Limitations/Condition	**b.** Compliance Demonstration
(1) New Emission Unit(s) P35A, P36A, P60, P62, P3, P64, P65. Once constructed and initially operating, these emission units shall operate under the applicable conditions in the construction permit 16-JJW-075. [s. 285.65(1) Wis. Stats. (Permit 16-JJW-075)]	(1) Compliance Reports/Records. The permittee shall submit periodic monitoring reports and certification of compliance as required by the current operation permit for any modified and new emission unit for the period when that unit becomes operational. Note that compliance monitoring and reporting requirements and limitations of any unmodified units remain in effect. [s. NR 407.05(9), Wis. Adm. Code (Permit 16-JJW-075)] (2) Completion of Operation Permit Application. The permittee shall update the permit application if any changes occur which are not specified or described in the plans and specifications approved under construction permit 16-JJW-075. [s. NR 407.05(9), Wis. Adm. Code (Permit 16-JJW-075)] (3) Submittal of Compliance Testing Information and Other Updates. The permittee shall submit to the Department any updates of the permit application. Updates are required if any changes that occur which are not specified or described in the plans and specifications dated April 29, 2016. The updates shall be made within 60 days of the date of the change. Other information to be submitted shall include the notification requirements and stack tests results and the update of the facility's Malfunction prevention and Abatement Plan. The continued operation of the modified and new emission units addressed in this construction permit are prohibited once the authorization to construct expires per I.Z.4.a.(2), unless any required updates have been submitted and the permittee has satisfied the notification requirements of I.Z.4.b.(1).[5] [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 16-JJW-075)] (4) All submittals described in this permit shall be made in writing and include the name of the facility, the facility's address, the construction permit number and a description of the affected emission unit(s). [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 16-JJW-075)]

Z. General Conditions Applicable to the Construction Permit.	
2. Updated Malfunction Prevention and Abatement Plan	
a. Limitations	**b.** Compliance Demonstration
(1) Malfunction Prevention and Abatement Plan. The permittee shall update the facility's Malfunction Prevention and Abatement Plan to include the operation and maintenance of the control equipment associated with the new emission unit(s) authorized by construction permit 16-JJW-075. [s. NR 439.11, Wis. Adm. Code (Permit 16-JJW-075)]	(1) Malfunction Prevention and Abatement Plan. The owner or operator shall update the facility's Malfunction Prevention and Abatement Plan to include the the new emission units authorized by construction permit 16-JJW-075 prior to the equipment becoming operational. [s. NR 439.11(1), Wis. Adm. Code (Permit 16-JJW-075)]

[5] To maintain the operation permit shield.

Z. General Conditions Applicable to the Construction Permit.	
3. Initial Stack Testing Requirements	
a. Limitations	**b.** Compliance Demonstration
(1) Emission Stack Testing. The permittee shall conduct a compliance emission stack test of the following sources within 60 days of achieving maximum production rate but no later than 180 days after initial startup for the following emission units and pollutants: • Process P64 – PM_{10} emissions and visible emissions to demonstrate compliance with the NSPS and pounds per hour limitations. • Fugitive F10 – visible emissions to demonstrate compliance with the NSPS limitations (F10 includes any grain handling operations as defined under 40 CFR 60 Subpart DD and the fugitive emissions from Process P64. (a) If compliance emission test(s) cannot be conducted within the time frames specified, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s). (b) All testing shall be performed with the emissions unit operating at capacity or as close to capacity as practicable and in accordance with approved procedures. If operation at capacity is not feasible, the source shall operate at a capacity level which is approved by the Department in writing. (c) The Department shall be informed at least 30 days prior to any stack testing so a Department representative can witness the testing. At the time of notification, a compliance emission test plan shall also be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method. The notification and test plan shall be submitted to the Department of Natural Resources Northeast Region Headquarters, 2984 Shawano Avenue, Green Bay, WI 54313-6727 or an alternative address provided by the facility's assigned compliance inspector. Alternatively, the Department accepts and encourages electronic submittals of test plans, uploaded through the permitee's Web Access Management System (WAMS) ID. For more details refer to the "Stack Testing Electronic Submittal Guidebook " on the DNR website. [ss. NR 439.07 and NR 440.08(4), Wis. Adm. Code (Permit 16-JJW-075)]	(1) Emission Stack Testing. Upon completion of any required compliance emission tests required under construction permit 16-JJW-075, the permittee shall submit two copies of the report on the tests for evaluation within 60 days of the date the tests were completed. The emission test report shall be submitted to the Department of Natural Resources Northeast Region Headquarters, 2984 Shawano Avenue, , Green Bay, WI 54313-6727 or an alternative address provided by the facility's assigned compliance inspector. Alternatively, the Department accepts and encourages electronic submittals of test plans, uploaded through the permitee's Web Access Management System (WAMS) ID. For more details refer to the "Stack Testing Electronic Submittal Guidebook" on the DNR website. [s. NR 439.04(1)(d), Wis. Adm. Code (Permit 16-JJW-075)]

Z. General Conditions Applicable to the Construction Permit.	
4. Construction Permit Notification and Authorization	
a. Limitations	**b.** Compliance Demonstration
(1) Notifications. The permittee shall inform the Department of the following dates: (a) The date construction commences on any new or modified emission unit(s) addressed in Permit 16-JJW-075. (b) The date the modified emission unit(s) becomes operational. (c) The date new emission unit(s) becomes operational. For purposes of this permit, "operational" shall be defined as the first time of any process related air contaminant is emitted into the ambient air. [s. NR 439.03(1), Wis. Adm. Code (Permit 16-JJW-075)]	(1) Notifications. The permittee shall submit to the Department of Natural Resources Northeast Region Headquarters, 2984 Shawano Avenue, Green Bay, WI 54313-6727 or an alternative address provided by the facility's assigned compliance inspector, in writing, within 15 days of the date the event, the following: (a) The date construction commences on the new or modified emission unit(s) addressed in Permit 16-JJW-075. (b) The date the modified emission unit(s) becomes operational. (c) The date new emission unit(s) becomes operational.

(2) Construction Authorization Expiration. The Authorization to Construct, under Construction Permit 16-JJW-075 expires 18 months after the date of issuance. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period. If 18 months is an insufficient time period for construction or modification, equipment shakedown, testing and Department evaluation of operation, the permit holder may request and the Department may approve in writing an extension of this permit. The conditions of the construction permit are permanent, unless revised, superseded or revoked. [ss. 285.60(1)(a)2. and 285.66(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code (Permit 16-JJW-075)] (3) Operation Permit Authorization. The emission units authorized in 16-JJW-075 may only operate under the operation permit if both of the following are met: (a) The emission units are constructed in accordance with the application as approved by the department, and (b) The construction and/or modification of the emission units is completed prior to expiration of the authority provided by the construction permit 16-JJW-075 to construct, modify, replace and/or reconstruct these emission units. [ss. NR 406.10, and 406.12, Wis. Adm. Code, and s. 285.65, Wis. Stats., Permit 16-JJW-075]	[s. NR 439.04(1)(d), Wis. Adm. Code (Permit 16-JJW-075)]